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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Sheldon

Serial No.: 10/713,811

Confirmation No.: 2575

Filed: November 14, 2003

For: High Tenacity and Toughness in  
Metallocene Polypropylene Films

§ Atty. Dkt. No.: COS-819

§

§ Group Art Unit: 1733

§

§ Cust. No.: 25264

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§ Examiner: Zacharia

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Dear Honorable Commissioner:

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**TRANSMITTAL LETTER**

In connection with the above identified application, Applicants respectfully  
resubmit the following in response to the Notice of Non-Compliant Appeal Brief dated  
September 1, 2006:

1. Appeal Brief.

Respectfully submitted,

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Registration No. 51,253

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**APPEAL BRIEF**

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 1733 dated April 21, 2006, finally rejecting claims 1-2, 4-5, 9-20 and 26-27.

**Real Party in Interest**

The present application has been assigned to Fina Technology Inc., P.O. Box 674412, Houston, Texas 77267.

**Related Appeals and Interferences**

Appellants assert that no other appeals, interferences or judicial proceedings are known to the Appellants, the Appellants' legal representative or Assignee that will

directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **Status of Claims**

Claims 1-2, 4-5, 9-20 and 26-27 are pending in the application and were originally presented in the application. Claims 1-2, 4-5, 9-14, 17-20 and 26-27 stand rejected under 35 U.S.C. §102(e) and claims 1-2, 4-5, 9-20 and 26-27 stand rejected under 35 U.S.C. §103(a). The rejection of the pending claims is appealed. The pending claims are shown in the attached Appendix A.

### **Status of Amendments**

No amendments have been made to the pending claims in response to the Final Office Action.

### **Summary of Claimed Subject Matter**

The claimed subject matter includes woven products formed from polypropylene resin produced by polymerizing a monomer in the presence of a metallocene catalyst system to produce metallocene catalyzed polypropylene. The formed polypropylene resin is processed to form a film product. The film product is then drawn at a draw ratio of from about 5.0:1 to about 10.0:1. The claimed subject matter further includes processing the film product into a slit tape product by slitting the film product, resulting in a film having high strength and toughness properties (*e.g.*, a tenacity of at least about 2.5 g/den). *See*, specification, at least paragraph 14, 24, 27 and 38.

The claimed subject matter further includes weaving the slit tape product into a fabric. The slit film substantially retains its strength and toughness properties after being subjected to stressful end-use processing, such as weaving. For example, the formed woven article has a tenacity of within about 10.0 percent of the tenacity of the slit film. In addition, the formed slit film unexpectedly retains a higher percentage of the film product tenacity than Ziegler-Natta polypropylene. *See, Id.* (inventive woven article exhibited 4% drop in tenacity after weaving, while the Z-N woven article exhibited 42% drop.)

Further, dependent claims recite metallocene catalyzed isotactic polypropylene. *See*, specification, at least paragraph 14.

### **Grounds of Rejection to be Reviewed on Appeal**

1. The rejection of claims 1-2, 4-5, 9-14, 17-20 and 26-27 under 35 U.S.C. §102(b) as being anticipated by *Sheldon*.
2. The rejection of claims 1-2, 4-5, 9-20 and 26-27 under 35 U.S.C. §103(a) as being unpatentable over *Schlecker* in view of *Gownder* or *Saito*.

### **Arguments**

#### **I. THE EXAMINER ERRED IN REJECTING CLAIMS 1-2, 4-5, 9-14, 17-20 AND 26-27 UNDER 35 U.S.C. §102(b) AS BEING ANTICIPATED BY *SHELDON***

Claims 1-14 and 17-27 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pub. No. 2004/0013870 (*Sheldon*.)

The Examiner states that because *Sheldon* teaches “a woven product formed from a slit film tape . . . having a tenacity of at least about 2.5 g/den, one skilled in the art would expect the tenacity of their woven product to inherently be within about 10.0% of the tenacity of the film product.” *See*, Final Office Action at page 3, last paragraph. Appellants strongly disagree. The Examiner’s proof of inherency and that one skilled in the art is aware of the property is based on Appellant’s own specification. (*See*, Final Office Action at page 3, last paragraph.

The reference must “sufficiently describe the claimed invention to have placed the public in possession of it.” *See*, *Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 1572, 24 U.S.P.Q.2d 1321, 1332 (Fed. Cir. 1992.) Further, that which is inherent in the prior art, if not known at the time of the invention, cannot form a proper basis for rejecting the claimed invention as obvious under Section 103. *See*, *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. 753, 756-57 (C.C.P.A. 1977.)

Inherent anticipation arises when “the prior art necessarily functions in accordance with, or includes, the claimed limitations” *See*, *Atlas Powder Co. v. Ireco, Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a

given set of circumstances is not sufficient.” See, *Continental Can Co. USA, Inc., v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). While Appellants acknowledge that *Sheldon* teaches a slit film, which may be formed from conventional catalysts, the slit film having a tenacity that overlaps the claimed ranges, Appellants submit that the Examiner has not met the burden of proving that a woven article formed from such slit film inherently (always) exhibits a tenacity that is within 10% of the tenacity of the slit film.

The Examiner has not demonstrated that one skilled in the art recognized the metallocene isotactic polypropylene (miPP) films may be capable of producing a lower drop in tenacity during weaving than Ziegler-Natta iPP films. To support an anticipation rejection based on inherency, an examiner must provide factual and technical grounds establishing that the inherent feature necessarily flows from the teachings of the prior art. See, *Ex parte Levy*, 17 U.S.P.Q.2d 1464 (Bd. Pat. App. & Int. 1990). The Examiner has not met this burden. The only grounds that the Examiner has used to establish inherency is the Appellants own specification.

Further, Appellants assert that the Examiner is misreading Appellants’ specification. Paragraph 14 of Appellants’ specification recites a film product. The “film product” is the inventive film product, not just any iPP film product. Therefore, the statement that the typical woven product produced from the film product may comprise a tenacity of within about 10.0 percent of the tenacity of the film product refers to the inventive woven product and not woven products in general.

Therefore, reversal of the rejection is respectfully requested.

## **II. THE EXAMINER ERRED IN REJECTING CLAIMS 1-2, 4-5, 9-20 AND 26-27 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *SCHLECKER* IN VIEW OF *GOWNDER* OR *SAITO***

Claims 1-2, 4-5, 9-20 and 26-27 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Pat. No. 5,393,598 (*Shlecker*) in view of U.S. Patent Pub. No. 2003/0183975 (*Gownder*) or U.S. Patent No. 6,096,843 (*Saito*.)

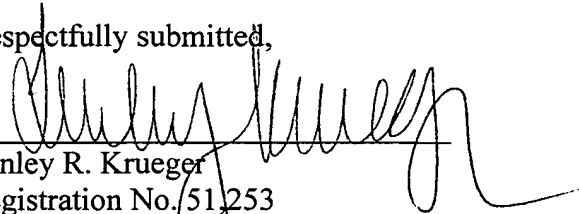
The Examiner set forth the same arguments for the §103(a) rejection as the §102(b) rejection. Appellants submit that the Examiner has not presented a prima facie

case of obviousness for the same reasons as the Examiner has not demonstrated inherency based on anticipation. Accordingly, Appellants feel that repeating such arguments is unnecessary. Based on such previously presented arguments, Appellants respectfully request reversal of the rejection.

### **Conclusion**

In conclusion, the references of record, either alone or in combination, nowhere teach, show or suggest the features of the pending claims. Thus, Appellants respectfully request reversal of the rejections of the pending claims.

Respectfully submitted,



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**Appendix A**  
***Pending Claims***

1. A woven product formed from a slit film product comprising:  
a metallocene catalyzed polypropylene; and  
a tenacity of at least about 2.5 g/den, wherein the film product is capable of being drawn at a draw ratio of from about 5.0:1 to about 10.0:1 and wherein the woven product comprises a tenacity of within about 10.0 percent of the tenacity of the slit film.
2. The film product of claim 1, wherein the film product further comprises a tenacity of about 5.0 g/den.
4. The film product of claim 1, wherein the draw ratio is about 9.25:1.
5. The film product of claim 1, wherein the metallocene catalyzed polypropylene comprises at least one additive.
9. The film product of claim 1, wherein the metallocene catalyzed polypropylene comprises a metallocene catalyzed isotactic polypropylene.
10. The film product of claim 9, wherein the metallocene catalyzed isotactic polypropylene comprises an isotacticity of less than about 99.0 percent.
11. The film product of claim 9, wherein the metallocene catalyzed isotactic polypropylene comprises an insertion error of more than about 2.0 percent.
12. The film product of claim 1, wherein the metallocene catalyzed polypropylene comprises a polymerized propylene.
13. A woven article formed from a film product of a process comprising:

- (A) polymerizing a monomer in the presence of a metallocene catalyst system to produce metallocene catalyzed polypropylene, wherein the metallocene catalyst system comprises a metallocene catalyst;
- (B) processing the metallocene catalyzed polypropylene into a film product; and
- (C) drawing the film product at a draw ratio of from about 5.0:1 to about 10.0:1, the film product comprising a tenacity of at least about 2.5 g/den;
- (D) processing the film product into a slit tape product, the processing comprising slitting the film product; and
- (E) weaving the slit tape product into a fabric, wherein the fabric comprises a tenacity of within about 10.0 percent of the tenacity of the film product.

14. The film product of claim 13, wherein the monomer comprises a propylene.

15. The film product of claim 13, wherein the metallocene catalyst system comprises a co-catalyst.

16. The film product of claim 13, wherein the co-catalyst comprises an organoaluminum compound.

17. The film product of claim 13, wherein the metallocene catalyst system comprises at least one of a homogenous catalyst system and a supported catalyst system.

18. The film product of claim 13, wherein said polymerizing the monomer is performed in a loop reactor system.

19. The film product of claim 13, wherein said process further comprises

- (i) extruding the metallocene catalyzed polypropylene; and
- (ii) drawing the metallocene catalyzed polypropylene through a die.



20. The film product of claim 13, wherein said polymerizing the monomer further comprises adding at least one additive.

26. The film product of claim 13, wherein the metallocene catalyzed polypropylene further comprises a metallocene catalyzed isotactic polypropylene.

27. The film product of claim 13, wherein the film product comprises an isotacticity of less than about 99.0 percent.

## **Appendix B**

### ***Evidence***

1. *Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 24 U.S.P.Q.2d 1321 (Fed. Cir. 1992.)
2. *In re Shetty*, 566 F.2d 81, 195 U.S.P.Q. 753 (C.C.P.A. 1977.)
3. *Atlas Powder Co. v. Ireco, Inc.*, 190 F.3d 1342 (Fed. Cir. 1999).
4. *Continental Can Co. USA, Inc., v. Monsanto Co.*, 948 F.2d 1264 20 U.S.P.Q.2d 1746 (Fed. Cir. 1991).
5. *Ex parte Levy*, 17 U.S.P.Q.2d 1464 (Bd. Pat. App. & Int. 1990).

**Appendix C**  
***Related Proceedings***

**Not Applicable**

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